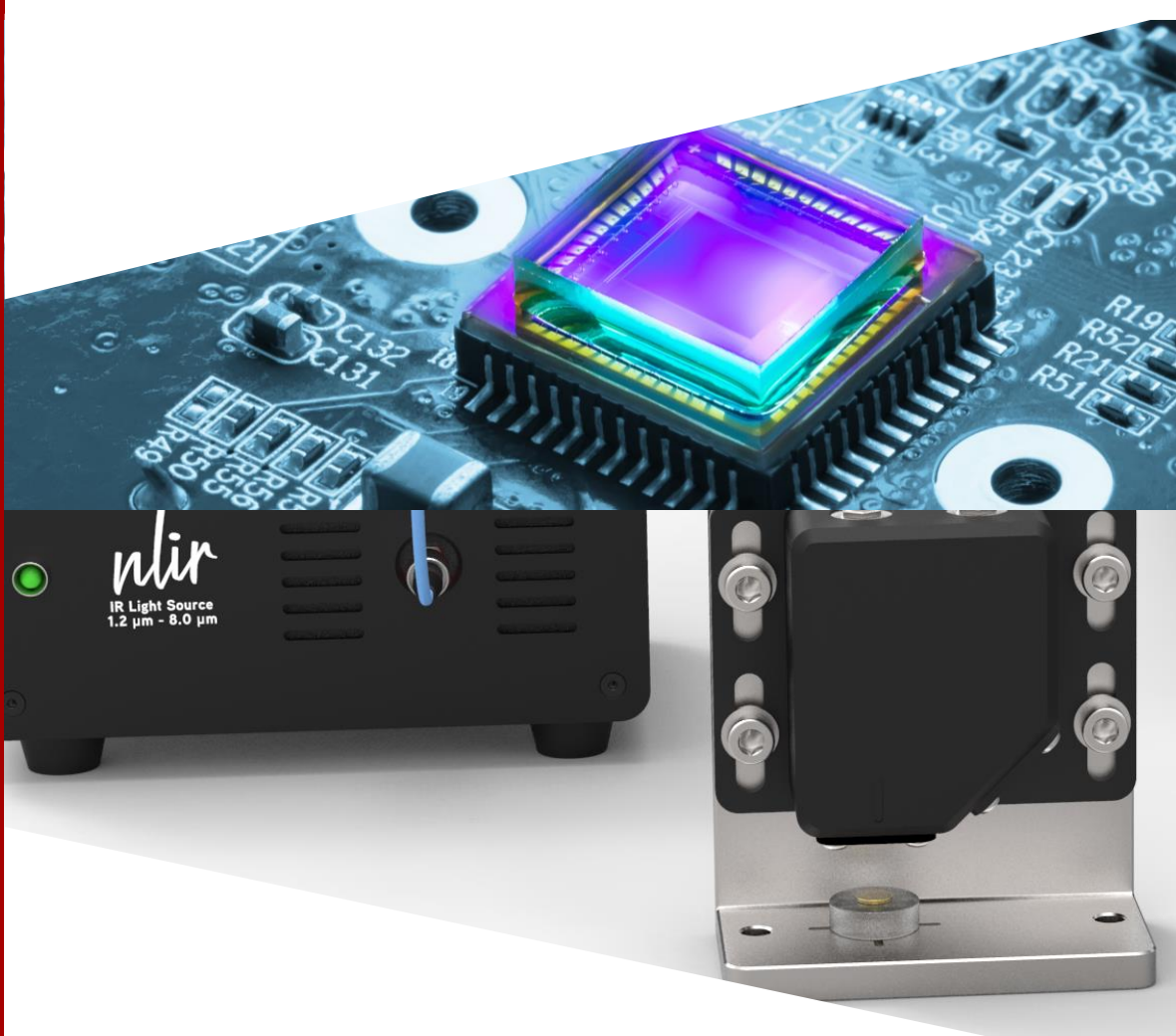


nlir

NLIR | Mid-Infrared Sensors



INSPECTION OF INTEGRATED IR COMPONENTS

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NLIR | Mid-Infrared Sensors



Don't let conventional spectrometers slow you down.

Upgrade to a fast and sensitive infrared spectrometer and start achieving accurate and efficient results in no time.

Contact us today to learn more about our cutting-edge technology and easy-to-use optical interfaces.

FAST AND SENSITIVE SPECTROSCOPY

Our infrared spectrometer is extremely useful for inspecting the performance of integrated IR devices, for example IR coating or filters. Unlike conventional FTIR spectrometers that can take too long to provide accurate results and are not easily fiber coupled, our fast and sensitive infrared spectrometer can deliver useful data in just milliseconds; the standard fiber coupling makes it easy to bring light to and from the sample. Together with a bandwidth of 2.0 – 5.0 μm and a resolution of 6 cm^{-1} , our spectrometer boasts a maximum full-spectrum readout rate of 400 Hz, making it a reliable and efficient solution.

NLIR BUNDLE FOR INTEGRATED OPTICS INSPECTION

Probing with infrared light poses a significant challenge in transmitting maximum sample information to the spectrometer. Our fiber-coupled reflection probe offers a solution to this challenge. It easily connects to our light source and spectrometer using standard infrared fibers. With a possible measurement area smaller than 400 μm in diameter, this setup is ideal for examining samples on integrated devices or small areas requiring high precision.

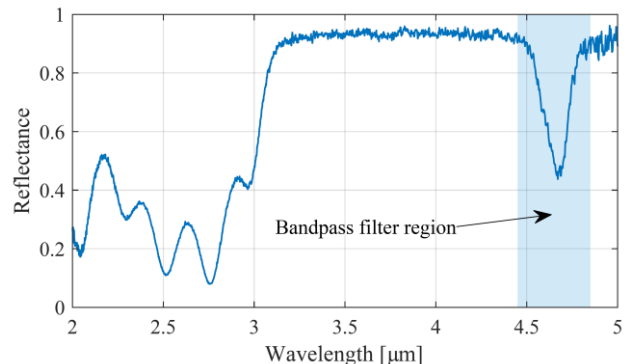


Schematics of NLIR light source, fiber reflection probe, and infrared spectrometer for measuring small samples on, for example, integrated devices. The two fibers are standard infrared fibers available for purchase with various core diameters.

FIBER REFLECTION PROBE MEASUREMENT

We have demonstrated the effectiveness of our fiber reflection probe by measuring the reflectance from an integrated bandpass filter with a measurement area of only 400 μm in diameter. Using a gold mirror as a reference, we observed a dip in reflectance at approximately 4.7 μm , corresponding to the center of the bandpass filter.

This high-quality spectrum illustrates the probe's ability to obtain accurate measurements even from very small samples in very little time.



Raw data (no smoothing, post-processing, or pixel binning) from a reflection measurement of an integrated bandpass filter. The blue-shaded region marks the spectral band of the filter. The total measurement time was 100 ms.